THAT WHICH IS CLAIMED:

1. A susceptor connection system for releasably connecting susceptors, the system comprising:

first and second susceptors comprised of a conductive material for supporting an induced current flow and thereby heating to a target temperature, each susceptor defining a peripheral edge portion;

at least one shoe adapted to be urged against the peripheral edge portions of the susceptors to place the edge portions of the susceptors in electrical contact, each shoe defining a passage for circulating a coolant to cool the susceptors; and

a compression device positioned adjacent at least one of the shoe and the peripheral edge portions of the susceptors, the compression device being configured to urge the shoe against the peripheral edge portions such that the susceptors are placed in electrical contact and the shoe thermally communicates with the peripheral edge portions to cool the peripheral edge portions.

2. A system according to Claim 1 further comprising a water source configured to deliver a flow of water to the shoe, the water being cooler than the target temperature of the susceptors.

3. A system according to Claim 1 wherein each susceptor is characterized by a Curie temperature at which the susceptor becomes paramagnetic.

4. A system according to Claim 1 further comprising an induction coil extending around the susceptors, the induction coil being configured to generate an electromagnetic field to induce a current in the susceptors and heat the susceptors to the target temperature.

5. A system according to Claim 1 wherein the compression device comprises a bladder configured to be expanded by a pressurized fluid to urge the shoe and the susceptors together.

6. A system according to Claim 1 wherein the peripheral edge portion of each susceptor defines a plurality of slots extending inward through the peripheral edge portions of the susceptors and thereby defining tab portions therebetween.

7. A system according to Claim 1 wherein opposed surfaces of the peripheral edge portions of the susceptors are coated with a conductive material.

8. A system according to Claim 7 wherein the opposed surfaces of the peripheral edge portions are plated with copper.

9. A system according to Claim 1 wherein a central portion of each susceptor inward of the peripheral edge portion is coated with a material comprising nickel-aluminum.

10. A system according to Claim 1 further comprising at least one clamping device configured to constrain the peripheral edge portions of the dies in electrical contact, the clamping device being configured to be adjusted as the susceptors change dimensionally.

11. An apparatus for processing a workpiece at a target temperature, the apparatus comprising:

first and second co-operable dies structured to define a die cavity therebetween for at least partially receiving the workpiece, at least one of the dies defining a contour surface corresponding to a desired configuration of the workpiece;

first and second susceptors disposed in the die cavity, the susceptors comprised of a conductive material for supporting an induced current flow and thereby heating the workpiece to a forming temperature, each susceptor defining first and second longitudinally opposite peripheral edge portions;

first and second shoes adapted to be urged against the first and second peripheral edge portions of the susceptors respectively to place the respective peripheral edge portions of the susceptors in electrical contact, each shoe defining a passage for circulating a coolant to cool the susceptors; and

at least one compression device positioned adjacent at least one of each shoe and the respective peripheral edge portions of the susceptors, the compression device

being configured to urge the shoes against the respective peripheral edge portions such that the susceptors are placed in electrical contact and the shoes thermally communicate with the peripheral edge portions to cool the peripheral edge portions.

12. An apparatus according to Claim 11 wherein a Curie temperature of each susceptor is about equal to the forming temperature of the workpiece.

13. An apparatus according to Claim 11 further comprising a water source configured to deliver a flow of water to each shoe, the water being cooler than the target temperature of the susceptors.

14. An apparatus according to Claim 11 wherein each susceptor is characterized by a Curie temperature at which the susceptor becomes paramagnetic.

15. An apparatus according to Claim 11 further comprising an induction coil extending around the susceptors, the induction coil being configured to generate an electromagnetic field to induce a current in the susceptors and heat the susceptors to a Curie temperature.

16. An apparatus according to Claim 11 wherein each compression device comprises a bladder configured to be expanded by a pressurized fluid to urge a respective one of the shoes against a respective one of the susceptors.

17. An apparatus according to Claim 11 wherein each peripheral edge portion of the susceptors defines a plurality of slots extending inward through the peripheral edge portions of the susceptors and thereby defining tab portions therebetween.

18. An apparatus according to Claim 11 wherein opposed surfaces of the peripheral edge portions of the susceptors are coated with a conductive material.

19. An apparatus according to Claim 11 wherein opposed surfaces of the peripheral edge portions of the susceptors are plated with copper.

20. An apparatus according to Claim 11 wherein a central portion of each susceptor between the peripheral edge portions is coated with a material comprising nickel-aluminum.

21. An apparatus according to Claim 11 further comprising at least one clamping device configured to constrain the peripheral edge portions of the dies in electrical contact, the clamping device being adjustable relative to the dies.

22. A method for releasably connecting susceptors and controlling the temperature in the susceptors, the method comprising:

providing first and second conductive susceptors;

urging peripheral edge portions of the susceptors together with at least one shoe to place the edge portions of the susceptors in electrical contact;

inducing a current in the susceptors and thereby heating the susceptors to a target temperature; and

circulating coolant through a passage defined by the shoe and thereby transferring thermal energy from the peripheral edge portions of the susceptors and controlling the temperature of the peripheral edge portions.

23. A method according to Claim 22 wherein said circulating step comprises delivering a flow of water from a water source through the shoe, the water being cooler than the peripheral edge portions of the susceptors.

24. A method according to Claim 22 wherein said inducing step comprises heating a portion of the susceptors to a Curie temperature at which the susceptors become paramagnetic.

25. A method according to Claim 22 wherein said inducing step comprises generating an electromagnetic field with an induction coil extending around the susceptors.

26. A method according to Claim 22 wherein said urging step comprises providing a pressurized fluid to a bladder to expand the bladder and urge together the

shoe and the peripheral edge portions of the susceptors, thereby electrically engaging the peripheral edge portions of the susceptors.

27. A method according to Claim 22 wherein said inducing step comprises heating each susceptor to a Curie temperature at which the susceptor becomes paramagnetic.

28. A method according to Claim 22 further comprising clamping the peripheral edge portions of the dies in electrical contact with a clamping device that is configured to adjust relative to the dies as the susceptors change dimensionally.